KADAR PATI RESISTEN, KALSIUM, DAN ZAT BESI SERTA DAYA TERIMA KUE KERING TEPUNG PISANG KEPOK DENGAN PENAMBAHAN TEPUNG TERI KERING TAWAR

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KADAR PATI RESISTEN, KALSIUM, DAN ZAT BESI SERTA DAYA TERIMA KUE KERING TEPUNG PISANG KEPOK DENGAN PENAMBAHAN TEPUNG TERI KERING TAWAR

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Abstrak

Latar Belakang : Ketergantungan terhadap impor tepung terigu perlu dikurangi dengan memanfaatkan bahan pangan lokal. Tepung pisang dapat dimanfaatkan untuk menggantikan tepung terigu dalam pembuatan kue kering. Pati resisten seperti yang terkandung dalam tepung pisang memberikan manfaat bagi kesehatan diantaranya sebagai prebiotik. Hasil fermentasi pati resisten oleh mikroflora usus berupa asam lemak rantai pendek menciptakan suasana asam dalam kolon sehingga mampu mencegah kanker dan meningkatkan bioavailabilitas, kelarutan serta absorbsi mineral seperti kalsium dan besi dalam kolon. Penambahan teri kering tawar bertujuan meningkatkan kadar protein tepung pisang setara dengan tepung terigu serta sebagai sumber kalsium dan zat besi.
Tujuan : Mengetahui kadar pati resisten, kalsium, dan zat besi serta daya terima kue kering tepung pisang dengan penambahan tepung teri kering tawar.
Metode : Penelitian ini merupakan penelitian eksperimental rancangan faktorial berupa kue kering tepung terigu dan tepung pisang dengan 3 konsentrasi penambahan tepung teri kering tawar ; 10%, 15%, dan 20%. Analisis statistik kadar pati resisten, kalsium, dan besi menggunakan uji *Two Way Anova* sedangkan daya terima menggunakan uji *Kruskal Wallis* dengan CI 99% yang dilanjutkan dengan uji *Mann Whitney*.
Hasil : Kue kering tepung pisang dengan 10% penambahan tepung teri kering tawar memiliki kadar pati resisten tertinggi (24,71 g/100 g) dan rata-rata kadar kalsium tertinggi (160 mg/100 g) adalah pada kue kering tepung pisang dengan 20% teri kering tawar. Kadar zat besi tertinggi (7 mg/100 g) adalah pada kue kering tepung terigu dengan 15% teri kering tawar. Kue kering yang paling disukai panelis adalah kue kering tepung terigu dengan 10% penambahan teri kering tawar.
Simpulan : Penggunaan tepung pisang dan 3 konsentrasi penambahan tepung teri kering tawar berpengaruh terhadap kadar pati resisten, kalsium, dan daya terima yang meliputi warna, aroma, tekstur, dan rasa kue kering namun tidak untuk kadar besi. Kue kering yang dapat dipilih karena kandungan pati resisten, kalsium, serta protein yang cukup tinggi dan dapat diterima konsumen adalah kue kering tepung pisang dengan 10% dan 15% penambahan tepung teri kering tawar.

Kata kunci : tepung pisang, teri kering tawar, pati resisten, kalsium, besi, daya terima

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LEVELS OF RESITANT STARCH, CALCIUM, IRON, AND ACCEPTANCE OF BANANA FLOUR COOKIES WITH PLAIN DRIED ANCHOVY FLOUR

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Abstract

Background : The use of local food source as the wheat flour alternative substitution is necessary to do to reduce the national dependences on wheat flour import. Banana flour can be used as the substitute of wheat flour in cookies production. Resistant starch (RS) as available in banana flour has been proven to give a benefit for health as its role as prebiotic in the colon. Short chain fatty acids as the product of RS fermentation by colon microflora has lower the rancidity in the colon so it may reduce the risk of colon cancer, increase the bioavailability, solubility, and absorption of mineral such as calcium and iron in the colon. Plain dried anchovy flour was added to increase protein content of banana flour in order to be equal with wheat flour protein and also as the source of calcium and iron.
Objectives : To find out the levels of RS, calcium, iron, and the acceptance of banana flour cookies with plain dried anchovy flour.
Method : This study was an experimental research with factorial design. Six treatments consist of cookies made from wheat flour and banana flour added with 3 levels of plain dried anchovy flour; 10%, 15%, and 20%. Two Way Anova test was used to analyze the data of RS, calcium, and iron levels, and Kruskal Wallis test with CI 99% continued with Mann Whitney test was used to analyze the acceptance data.
Results : Banana flour cookies with 10% plain dried anchovy flour had the highest RS level (24,71 g/ 100 g). The highest average of calcium content (160 mg/100g) was in cookies with 20% plain dried anchovy flour and the highest average of iron content (7 mg/ 100g) was in wheat flour cookies with 15% plain dried anchovy flour. Wheat flour cookies with 10% plain dried anchovy flour addition had the best acceptance from the panelists.
Conclusion : The use of banana flour and 3 levels of plain dried anchovy flour addition significantly influencing the RS, calcium levels and also the acceptance of cookies color, smell, texture, and taste but not for the level of iron. Cookies made from banana flour with 10% and 15% plain dried anchovy flour could be chosen because of its content of RS, calcium, and protein, and was also acceptable by the panelists.

Key Words : Banana flour, plain dried anchovy, resistant starches, calcium, iron, acceptance

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